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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,572	09/01/2006	Andrew Clive Jackson	2004CH006	6232
25255 7590 12/17/2009 CLARIANT CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 4000 MONROE ROAD CHARLOTTE, NC 28205				
EXAMINER AHVAZI, BILAN				
ART UNIT		PAPER NUMBER		
1796				
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12/17/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,572

Applicant(s)

JACKSON, ANDREW CLIVE

Examiner

BIJAN AHVAZI

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 01 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the amendment filed on September 08, 2009.
2. Claims 1-11 are pending. Claim 5 is amended. Claims 12-14 are canceled.
3. The terminal disclaimer filed on 9/08/2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,911,116 B2 and U.S. Patent No. 7,198,731 B2 has been reviewed and is accepted. The terminal disclaimer has been recorded.
4. The rejection of claim 5 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn in view of the Applicant's amendment.
5. Claims 1-11 stand rejected in view of the Applicants' arguments.

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b)/103(a) that form the basis for the rejections under this section made in this Office action:

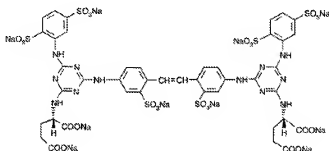
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 5-6, 9-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rohringer *et al.* (WO 98/42685).

Regarding claims 1 and 2, Rohringer *et al.* disclose a storage-stable aqueous solution, wherein new compounds, in particular 4,4'-diaminostilbene-2,2'-disulfonic acid compounds are useful as fluorescent whitening agents or for inhibiting (quenching) the effect of anionic fluorescent whitening agents on substrates (Page 1, lines 1-3). Rohringer *et al.* disclose an aqueous solution comprising an optical brightener of formula (1) as shown below in Example 9 (Page 23) or Example 11 (Page 24), wherein the amount of 0.005-2% is utilized as shown by the detergent composition (i.e falling with the same range of recited 0.214 mol/kg, Page 38 claim 52, (v)) of at least one compound of the formula as set forth corresponding to the instant applicant's limitation claims 1-2.



Regarding claim 5, Rohringer *et al.* disclose a storage-stable aqueous solution, wherein the paper coating composition is prepared by mixing the components in any desired sequence at a temperature from 10 to 100°C (Page 34, Claim 22), in which the components also include customary auxiliaries which can be added to regulate the rheological properties of the coating compositions (Page 34, Claim 23), wherein the auxiliaries are natural binders, cellulose ethers, alginic acid, alginates, polyethylene oxide or polyethylene oxide alkyl ethers, copolymers of ethylene oxide and propylene oxide, polyvinyl alcohol, water-soluble condensation products of

formaldehyde with urea or melamine, polyphosphates or polyacrylic acid salts (Page 34, Claim 24) corresponding to the instant applicant's limitation claim 5.

Regarding claims 6 and 11, Rohringer *et al.* disclose a process for preparing a storage-stable aqueous solution. The method of producing the optical brightener of formula (1) as shown in Example 9 (Page 23), wherein the free acid corresponding to the sodium salt of formula (1) is precipitated in acetone using HCl and the free acid so obtained is filtered off with suction. The filter residue is then dissolved in 100 mls of water and the solution is adjusted to pH 8.5. After evaporation and drying, there remain 17.5 g (67% theory) of the compound of formula (1) corresponding to the instant applicant's limitation claims 6 and 11.

Regarding claims 9 and 10, Rohringer *et al.* disclose a process for preparing a storage-stable aqueous solution, wherein Rohringer *et al.* provide a method for the fluorescent whitening of a paper surface, comprising contacting the paper surface with a coating composition comprising a white pigment; a binder dispersion; optionally a water-soluble co-binder (silent on solubilizing agent), and sufficient of a fluorescent whitening agent having the formula (1), to ensure that the treated paper contains 0.01 to 1 % by weight, based on the white pigment, of a fluorescent whitening agent having the formula (1) (Page 5), wherein the white pigment component is an aluminum or magnesium silicate, barium sulfate, satin white, titanium dioxide, calcium carbonate (chalk) or talcum (Page 33, Claim 15) corresponding to the instant applicant's limitation claim 9, wherein the method for the fluorescent whitening of paper comprising adding the fluorescent whitening agent having the formula (1) to an aqueous paper pulp in the wet end (Page 34, Claim 27) corresponding to the instant applicant's limitation claim 10.

Since Rohringer *et al.* teach the a storage-stable aqueous solution and a process for preparing a storage-stable aqueous solution as claimed, the aqueous solution composition of Rohringer *et al.* would inherently be the same as claimed (e.g. amount of 0.214 ml/kg and no solubilizing agent). If there is any difference between the product of Rohringer *et al.* and the product of the instant claims, the difference would have been minor and obvious. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. See MPEP 2112.01(I). The storage-stable aqueous solution of Rohringer *et al.* would inherently possess the recited limitation because same ingredients and condition are utilized. Rohringer *et al.* disclose all the limitations of the instant claims. Therefore claims 1-2, 5-6, 9-11 are as being anticipated by Rohringer *et al.* Alternatively, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within generic disclosure of the prior art.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 4, 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rohringer *et al.* (WO 98/42685) as applied to claims 1-2, 5-6, 9-11 above, and further in view of Farrar *et al.* (Pat. No. US 6,911,116 B2).

Regarding claims 7 and 8, Rohringer *et al.* discloses the features as discussed above. Rohringer *et al.* do not expressly teach the method wherein the removal of the alkali metal of amines salt is done by membrane filtration.

However, Farrar *et al.* teach cationically modified white pigments, their production and use (Col. 1, lines 49-50). Farrar *et al.* teach that the obtained aqueous composition of (P_{AB}) is an aqueous solution, i.e. a true or at least colloidal solution. It can be used directly as produced, or if desired, it can be modified in salt content and/or concentration e.g. by membrane filtration, and/or it may be combined with any further desired components, e.g. with an additive that stops the growth of disturbing micro-organisms or with a biocide e.g. in a concentration of 0.001 to 0.1% by weight referred to the liquid composition (Col. 11, lines 63-67; Col. 12, lines 1-4) corresponding to the instant applicant's limitation claims 7, and 8. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify a storage-stable aqueous solution by Rohringer *et al.* so as to include the removal of the alkali metal of amines salt is done by membrane filtration as taught by Farrar *et al.* with reasonable expectation that this would result in removing the by-product as taught by Farrar *et al.* (Col. 11, lines 63-67; Col. 12, lines 1-4). Since it has been held that where general conditions of the claim are disclosed in the prior art, discovering the removal of the alkali metal or amine by ultrafiltration or membrane filtration involves only routine skill in the art. Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive

composition because the disclosure of the inventive subject matter appears within generic disclosure of the prior art.

Regarding claims 3, 4, Rohringer *et al.* teach a storage-stable aqueous solution, wherein the amount of yield synthesis is 17.5 g (0.114 mol/kg) with 0.228 mol/kg (50% by weight of the compound of formula (1) as shown below in Example 9 (Page 23) or Example 11 (Page 24), wherein the amount of 0.005-2% is utilized as shown by the detergent composition (i.e falling with the same range of recited 0.214 mol/kg, Page 38 claim 52, (v)) of at least one compound of the formula as set forth corresponding to the instant applicant's limitation claims 3 and 4. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Response to Arguments

10. Applicant's arguments filed on September 08, 2009 have been fully considered but they are not persuasive.

In response to applicant's arguments that the aqueous solution of example 9 of WO 98/42685 A has a concentration of 17.5% by weight, which is equivalent to 0.114 mol/kg, thus this is far away from the instantly claimed minimum concentration of 0.214 mol/kg.

The examiner respectfully disagrees. Rohringer *et al.* teach a storage-stable aqueous solution, wherein the amount of yield synthesis is 17.5 g (0.114 mol/kg) with 0.228 mol/kg (50%

by weight of the compound of formula (1) as shown below in Example 9 (Page 23) or Example 11 (Page 24), wherein the amount of 0.005-2% is utilized as shown by the detergent composition (i.e falling with the same range of recited 0.214 mol/kg, Page 38 claim 52, (v)) of at least one compound of the formula as set forth. Thus, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

In response to applicant's arguments that Rohringer *et al.* do not expressly disclose the method, wherein the removal of the alkali metal of amines salt is done by membrane filtration.

The examiner respectfully disagrees. Rohringer *et al.* discloses the features as discussed above. Rohringer *et al.* do not expressly teach the method wherein the removal of the alkali metal of amines salt is done by membrane filtration. However, Farrar *et al.* teach cationically modified white pigments, their production and use (Col. 1, lines 49-50). Farrar *et al.* teach that the obtained aqueous composition of (P_{AB}) is an aqueous solution, i.e. a true or at least colloidal solution. It can be used directly as produced, or-if desired, it can be modified in salt content and/or concentration e.g. by membrane filtration, and/or it may be combined with any further desired components, e.g. with an additive that stops the growth of disturbing micro-organisms or with a biocide e.g. in a concentration of 0.001 to 0.1% by weight referred to the liquid composition (Col. 11, lines 63-67; Col. 12, lines 1-4) corresponding to the instant applicant's limitation claims 7, and 8. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify a storage-stable aqueous solution by Rohringer *et*

al. so as to include the removal of the alkali metal of amines salt is done by membrane filtration as taught by Farrar *et al.* with reasonable expectation that this would result in removing the by-product as taught by Farrar *et al.* (Col. 11, lines 63-67; Col. 12, lines 1-4). Since it has been held that where general conditions of the claim are disclosed in the prior art, discovering the removal of the alkali metal or amine by ultrafiltration or membrane filtration involves only routine skill in the art. Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within generic disclosure of the prior art.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

11. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bijan Ahvazi, Ph.D. whose telephone number is (571)270-3449. The examiner can normally be reached on M-F 8:0-5:0. (Off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BA/
Bijan Ahvazi,
Examiner
Art Unit 1796
12/02/2009

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit 1796